IFAS: India's No. 1 Institute CSIR UGC NET, SET & All MSc. Entrance Exams

> The function of education is to teach one to think intensively and to think critically Intelligence plus character—that is the goal of true education

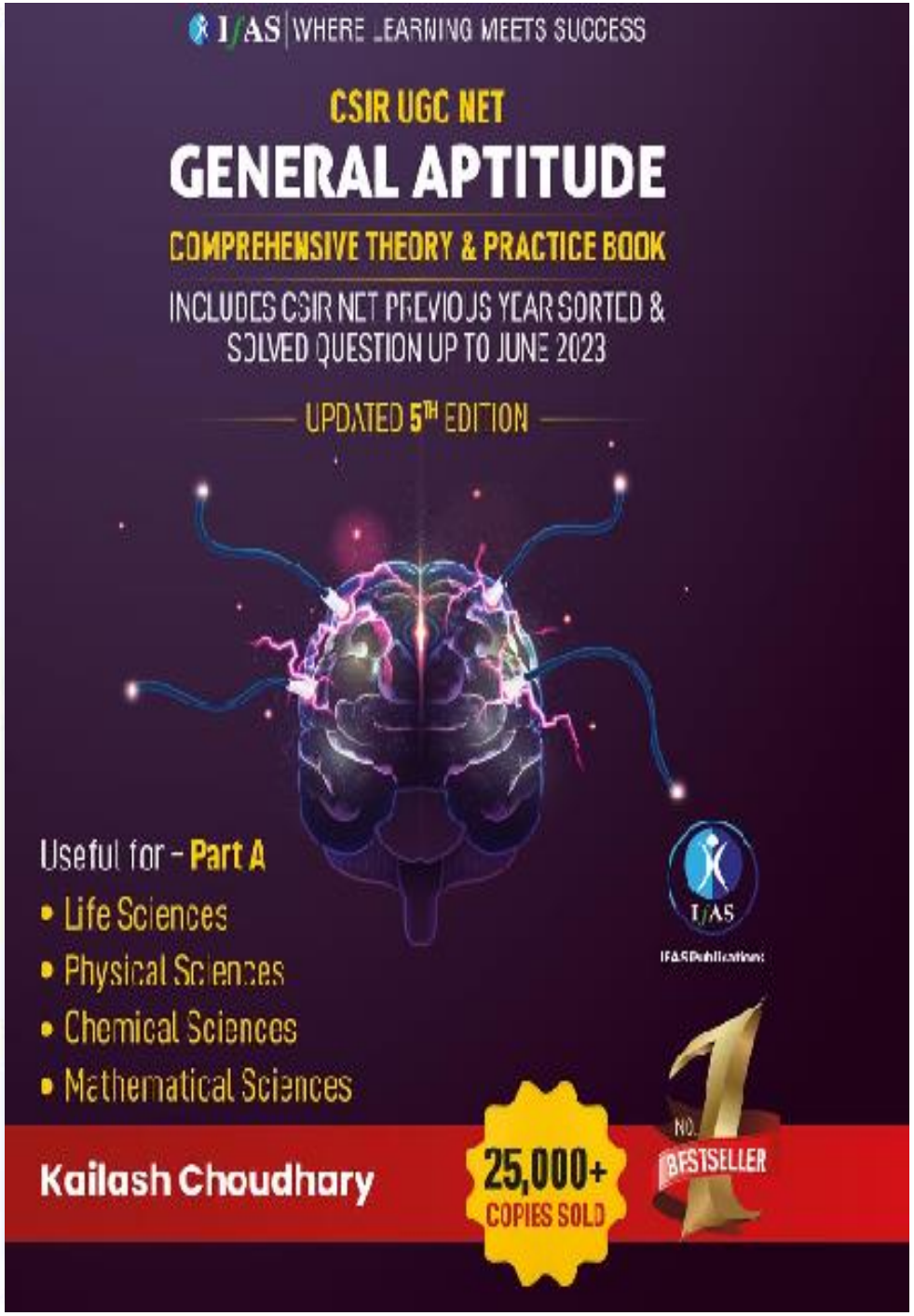
CSIR NET - GENERAL APTITUDE

QUANTITATIVE APTITUDE

L-10 | **Data interpretation**

IfAS

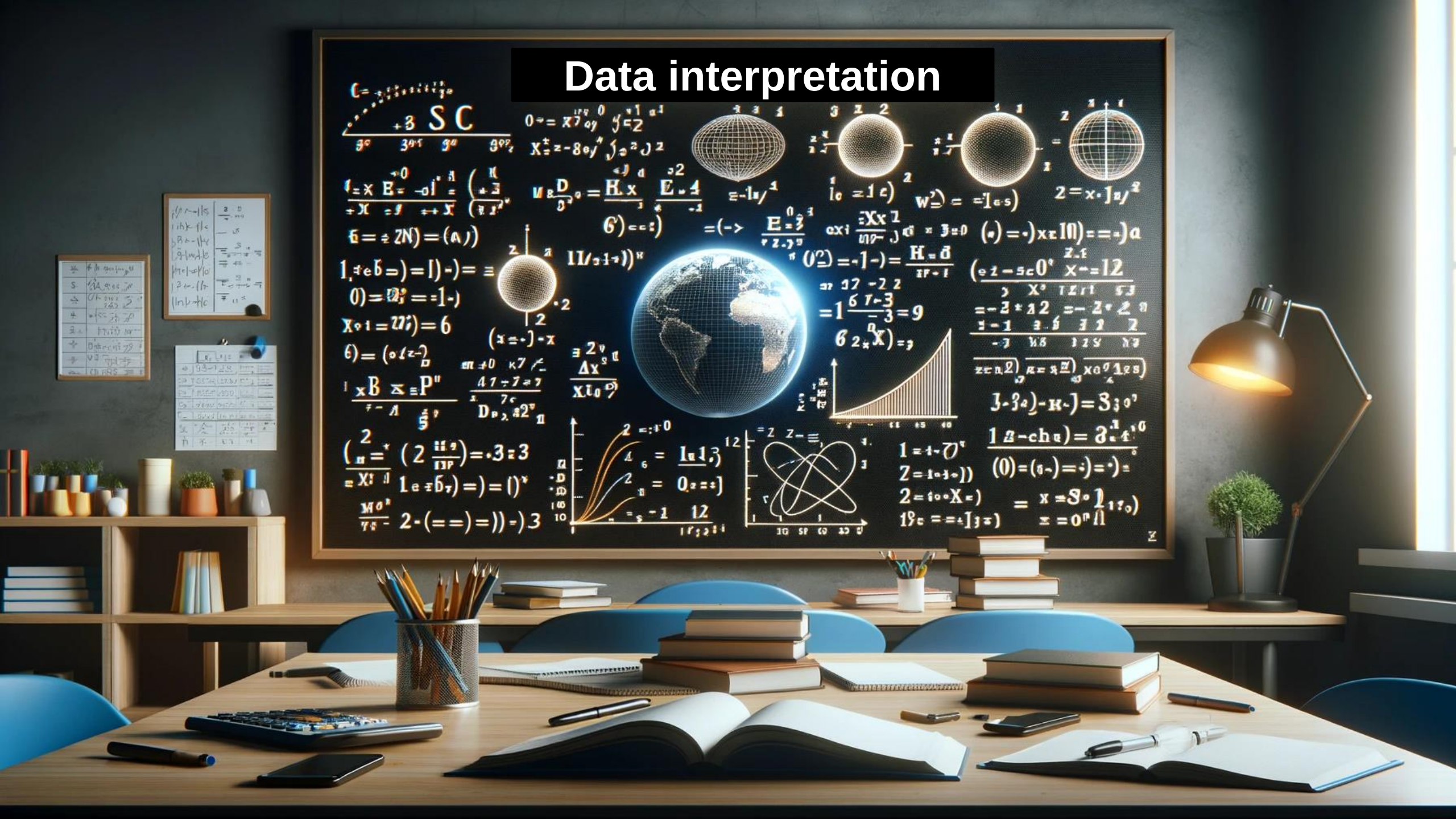
Order Online and Get Free Delivery Across India



Topic Covered in Today's Session

1. What is Data interpretation ?
2. Types of charts
3. Practice questions

Data interpretation



What is Data interpretation ?

Types of charts

1. Data Tables: Data is presented in the form of simple table into rows and columns.

Year	Delhi			H.P			U.P			Punjab			Haryana		
	App	Qual	Sel	App	Qual	Sel	App	Qual	Sel	App	Qual	Sel	App	Qual	Sel
1997	8000	850	94	7800	810	82	7500	720	78	8200	680	85	6400	700	75
1998	4800	500	48	7500	800	65	5600	620	85	6800	600	70	7100	650	75
1999	7500	640	82	7400	560	70	4800	400	48	6500	525	65	5200	350	55
2000	9500	850	90	8800	920	86	7000	650	70	7800	720	84	6400	540	60
2001	9000	800	70	7200	850	75	8500	950	80	5700	485	60	4500	600	75

1999 → Punjab → Qual → 525

2001 → U.P → Qual → 950

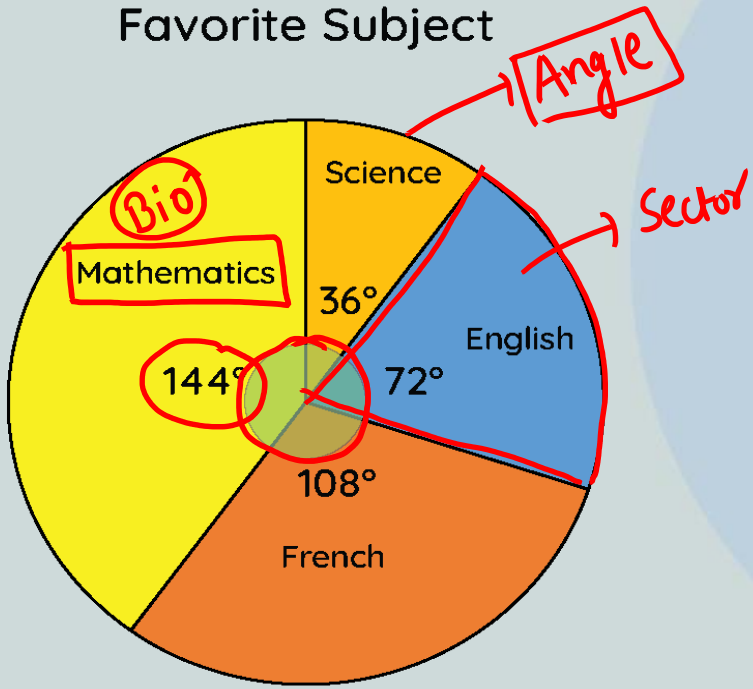
What is the difference b/w the selected candidates in 2000 from U.P and H.P.

⇒ 16

2. Pie Chart:

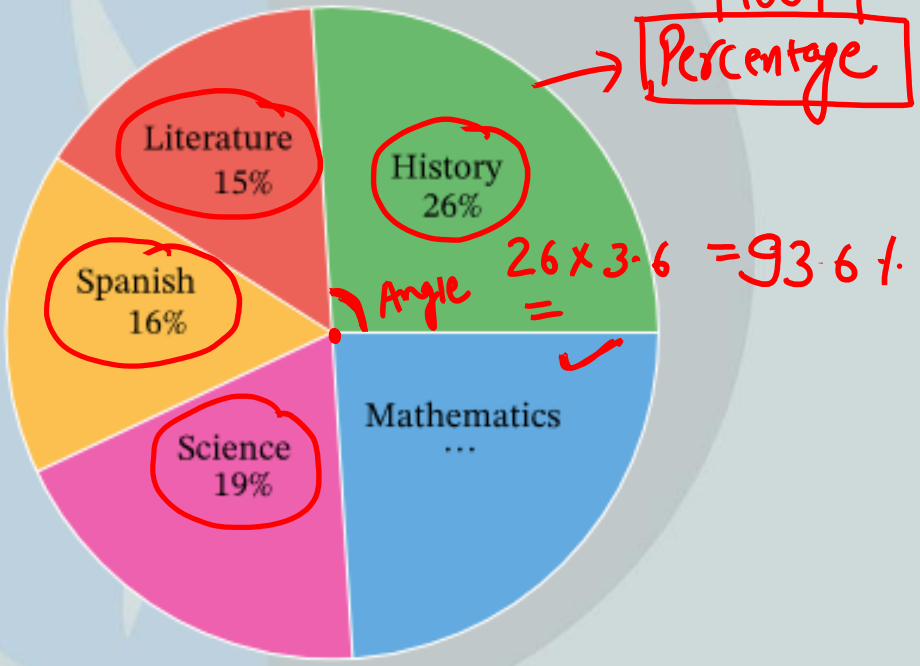
A pie chart is a circular chart in which data is displayed in the form of pie slices.

360°



Angle

Sector



100 %

Percentage

$26 \times 3.6 = 93.6°$

Angle

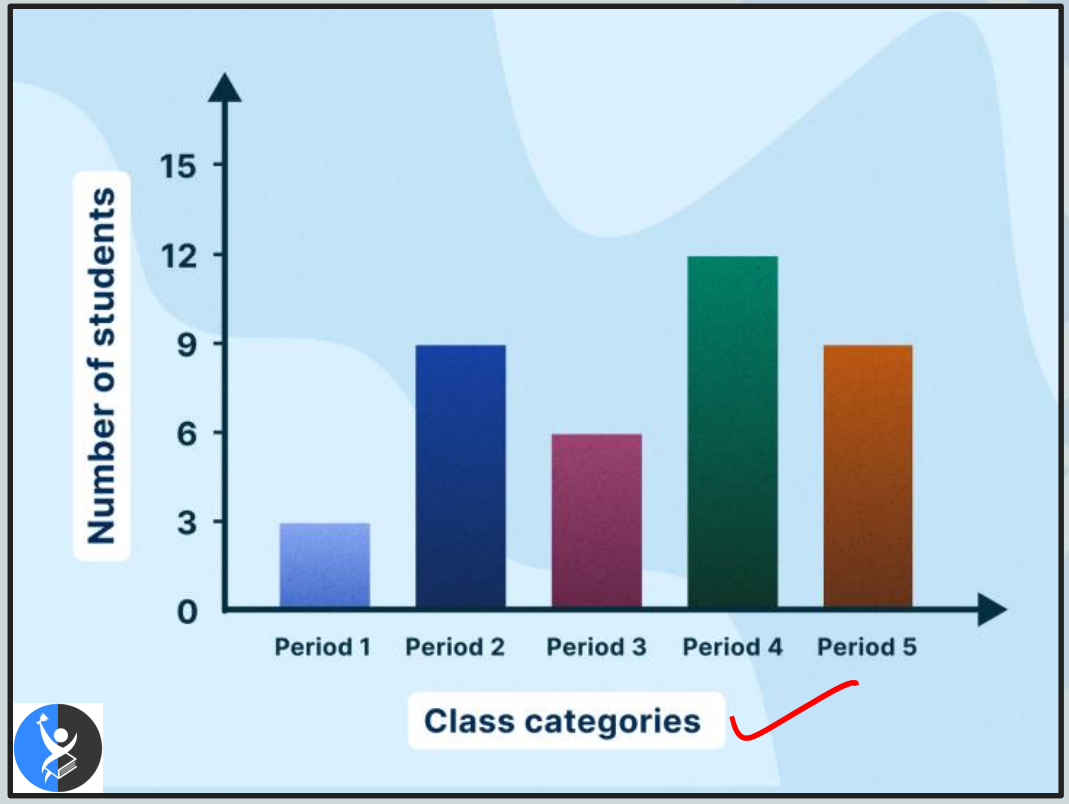
$100\% \equiv 360°$

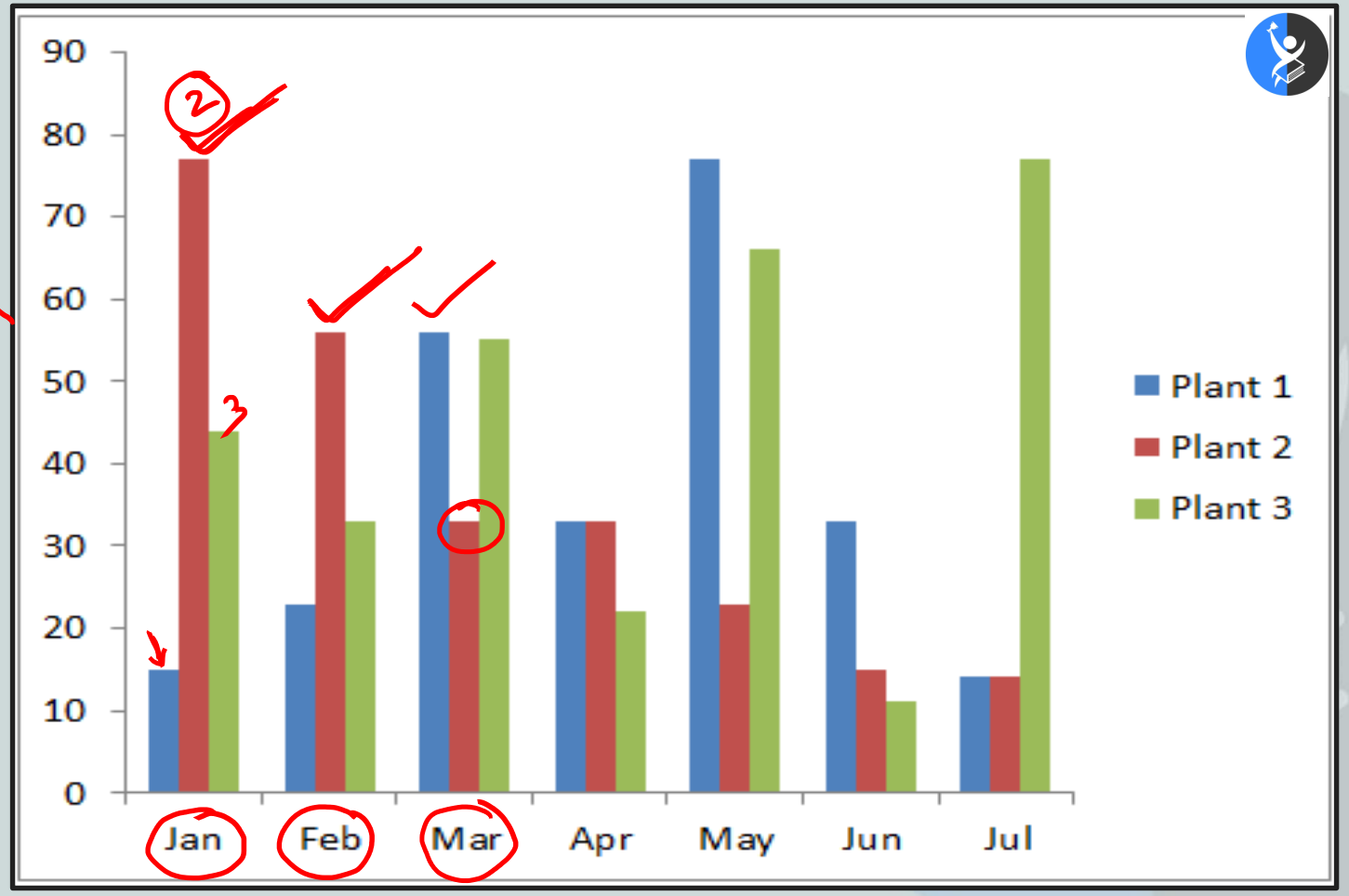
$1\% \equiv \frac{36°}{10\cancel{0}} = 3.6°$

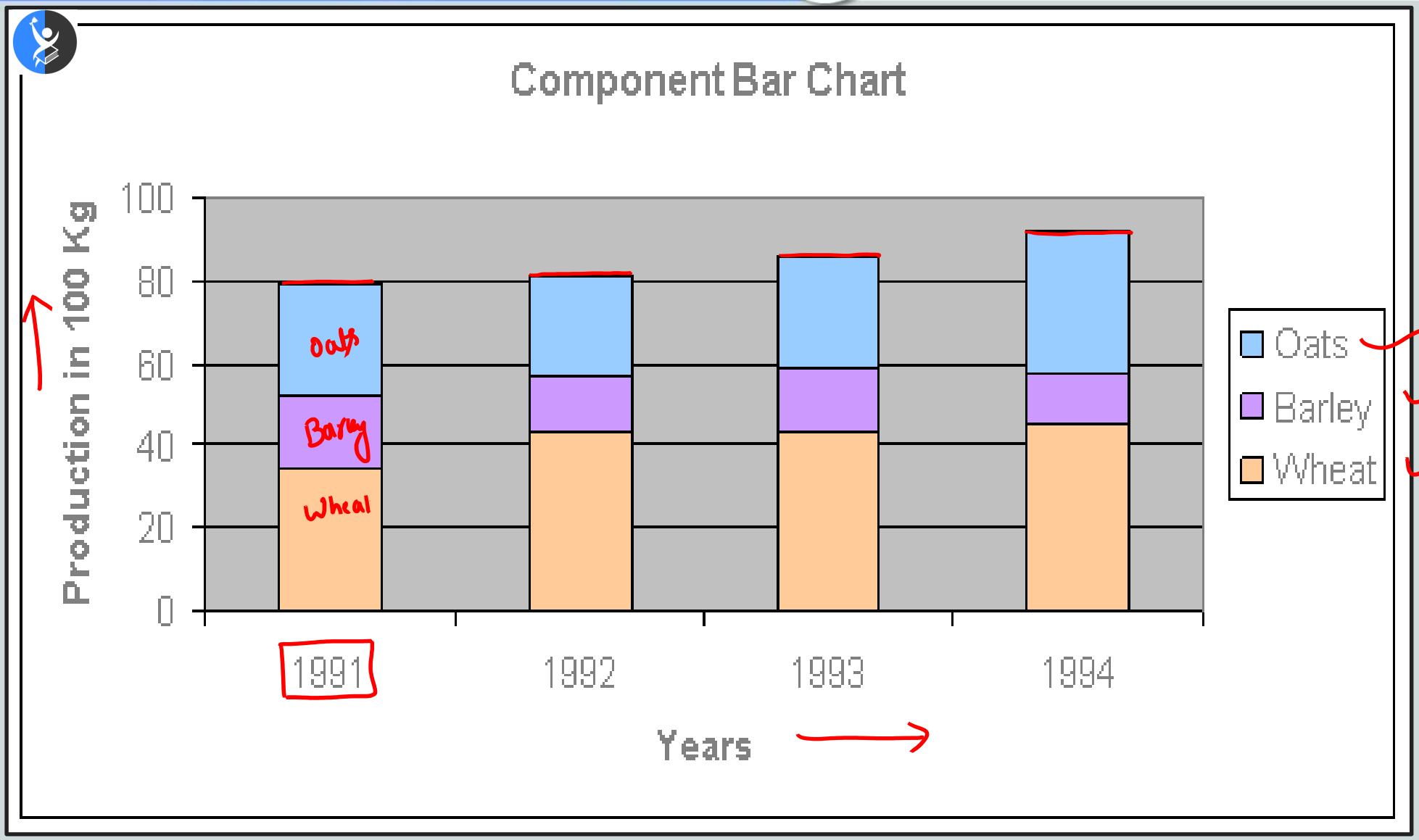
$1\% \equiv 3.6°$

3. Bar Chart:

A bar chart portrays a visual interpretation of data with the help of vertical or horizontal rectangular bars where the lengths of the bars are proportional to the data to be represented.

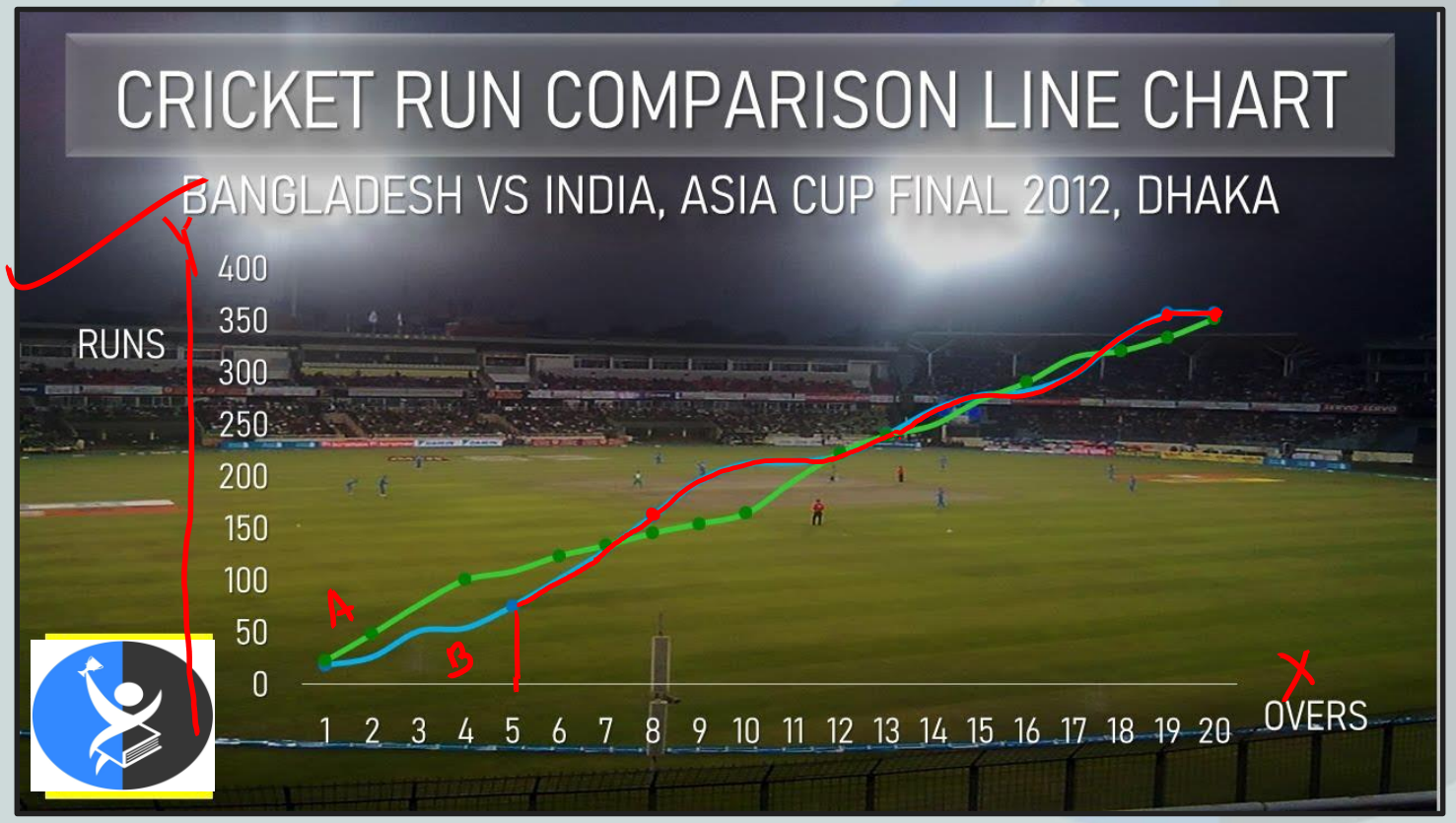



90
80
70
60
50
40
30
20
10
0
Jan
Feb
Mar
Apr
May
Jun
Jul
Plant 1
Plant 2
Plant 3

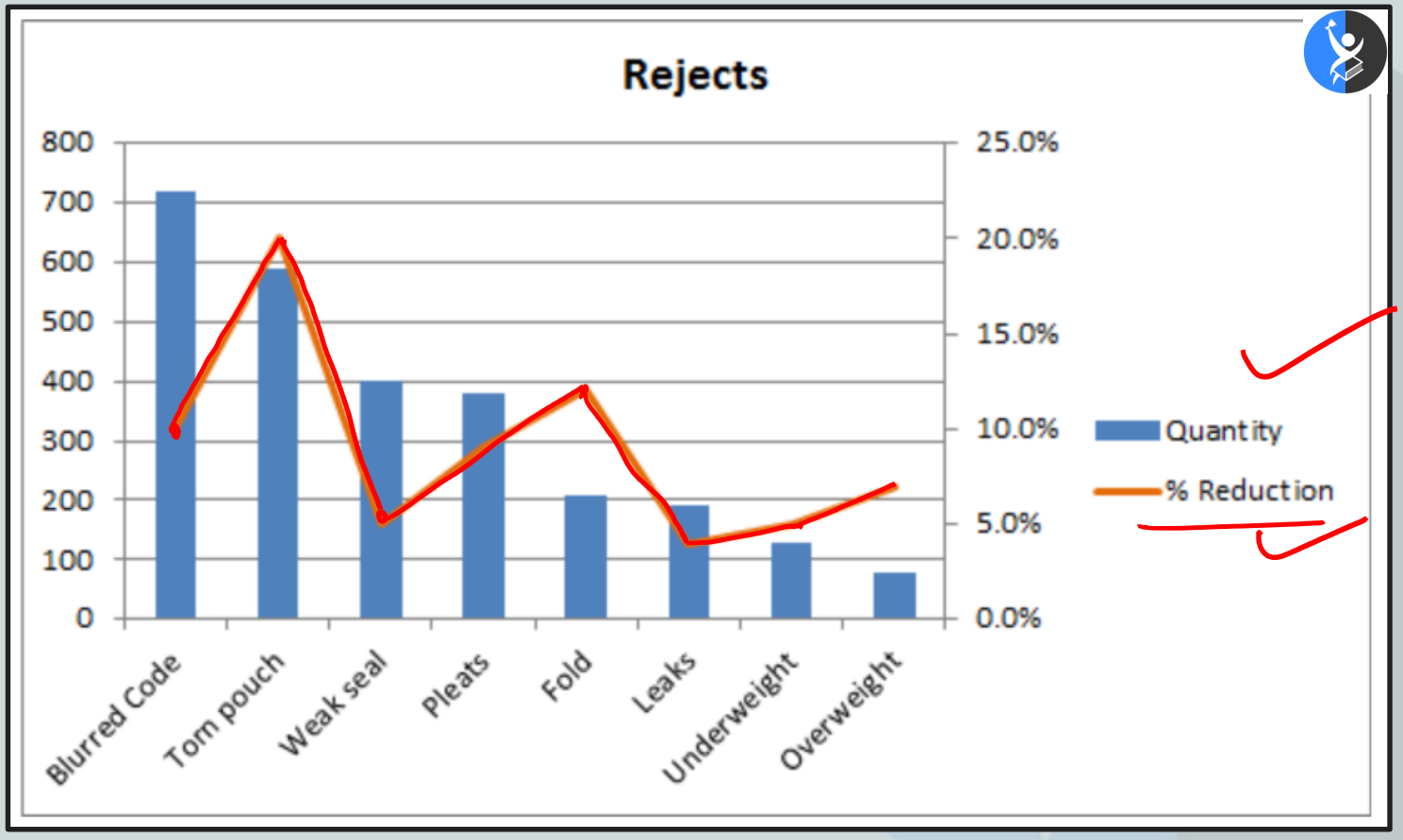

Component Bar Chart
Production in 100 Kg
100
80
60
40
20
0
Oats
Barley
Wheat
1991
1992
1993
1994
Years
Oats
Barley
Wheat

4. Line Graph:

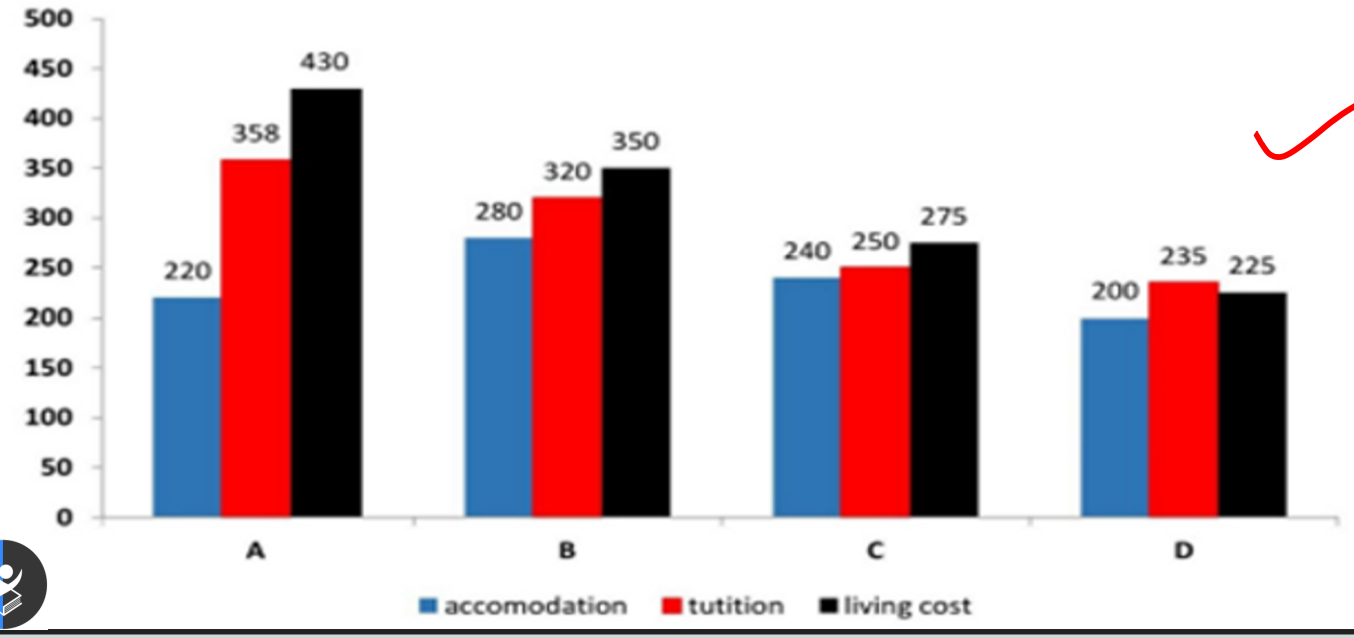
A line graph displays information as a series of data points called 'markers' connected by straight line segments. Line graphs display data in two dimensions x-axis and the y-axis.



5. Mix graph :


Rejects
800
700
600
500
400
300
200
100
0
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Quantity
% Reduction
Blurred Code
Torn pouch
Weak seal
Pleats
Fold
Leaks
Underweight
Overweight

Expenditure of studying abroad	
Country	US ($)
A	875
B	735
C	540
D	435



Bar - Pie
line - Pie

The following table shows the number of persons (in Thousands) who got affected by 'COVID-19' pandemic in five different cities (A-E) of India and also presents the ratio of affected male to female in them. Based on the data in the table, answer the questions 1-5:

A → male = $\frac{8}{64} \times \frac{5}{8} = 40$

$\frac{8}{64} \times \frac{3}{8} = 24$

D → Female

$\frac{4}{48} \times \frac{5}{12} = 20$

City-wise Persons Affected by COVID-19.

City	No. Of Affected (In Thousand)	Ratio Affected Male: Female
A	64	5:3
B	54	5:4
C	16	3:1
D	48	7:5
E	27	2:1

City-wise Persons Affected by COVID-19.

City	No. Of Affected (In Thousand)	Ratio Affected Male: Female
A	64 × 5/8 = 40	5:3 → A
B	54 × 5/9 = 30	5:4 → B
C	16	3:1
D	48	7:5
E	27	2:1

10

% decrease = $\frac{\text{Decrease in Quantity}}{\text{original Quantity}} \times 100$

$= \frac{10}{40} \times 100 = 25\%$ Decrease

$\frac{(A-B)}{A} \times 100$

Q1.Number of male persons affected by 'COVID-19' in City 'B' is what percent more or less than that of number of male persons from City 'A' who were affected by 'COVID-19?

1. 25% less
2. 30% less
3. 25% more
4. 20% less

City-wise Persons Affected by COVID-19.

City	No. Of Affected (In Thousand)	Ratio Affected Male: Female
A	64 × 3/8 = 24	5:3
B	54 × 4/9 = 24	5:4
C	16 × 1/4 = 4	3:1
D	48 × 5/12 = 20	7:5
E	27 × 1/3 = 9	2:1

Av. $= \frac{8100}{5} = 16200$

Q2. Find the average number of females who were affected by "COVID-19' in all the five cities.

1. 14200
2. 12600
3. 16200
4. 12200

1 Min

City-wise Persons Affected by COVID-19.

City	No. Of Affected (In Thousand)	Ratio Affected Male: Female
A	64	5:3
B	54	5:4
C	16	3:1
D	48	7:5
E	27	2:1

B: 54 → 6 × 5/9 = 30
E: 27 → 9 × 2/3 = 18
60

A: 24
C: 12 → 4
D: 20
48

60 − 48 = 12

Q3. What is the difference between total number of males in cities 'B', 'C'and 'E' together and total number of females in Cities 'A', 'C' and 'D' together who are affected by 'COVID-19?

1. 15000
2. 13000
3. 12000
4. 14000

City-wise Persons Affected by COVID-19.

City	No. Of Affected (In Thousand)	Ratio Affected Male: Female
A	64	5:3
B	54	5:4
C	16	3:1
D	48	7:5
E	27	2:1

Q4. What is the ratio of number of females in City 'B' and number of females in City 'D' who are affected by "COVID-19?

1. 2:5
2. 4:5
3. 5:6
4. 6:5

$\frac{B}{D} = \frac{24}{20} = \frac{6}{5}$

There are two examinations, A and B in a subject which are evaluated out of 30 and 70 marks, respectively. In order to pass the course the student has to get at least 40% in total and at least 40% in B. The following are the marks of the students S_1 to S_4. The only student/s to have passed is/are:

(1) S_1, S_3 (2) S_1, S_2, S_4 (3) S_1, S_2 (4) S_1

$70 \times \frac{40}{100} = 28$

Students	A _/30	B 28/70	40/100
S_1	12	+28	= 40
S_2	10	29	39
S_3	16	27	
S_4	05	29	34

The data given the following table summarizes the monthly budget of an average household:

The approximate percentage of the monthly budget NOT spent on savings is:

(1) 10% (2) 14% (3) 81 % (4) 86%

Category	Amount
Food	4000
Clothing	1200
Rent	2000
Savings	1500
Others	1800

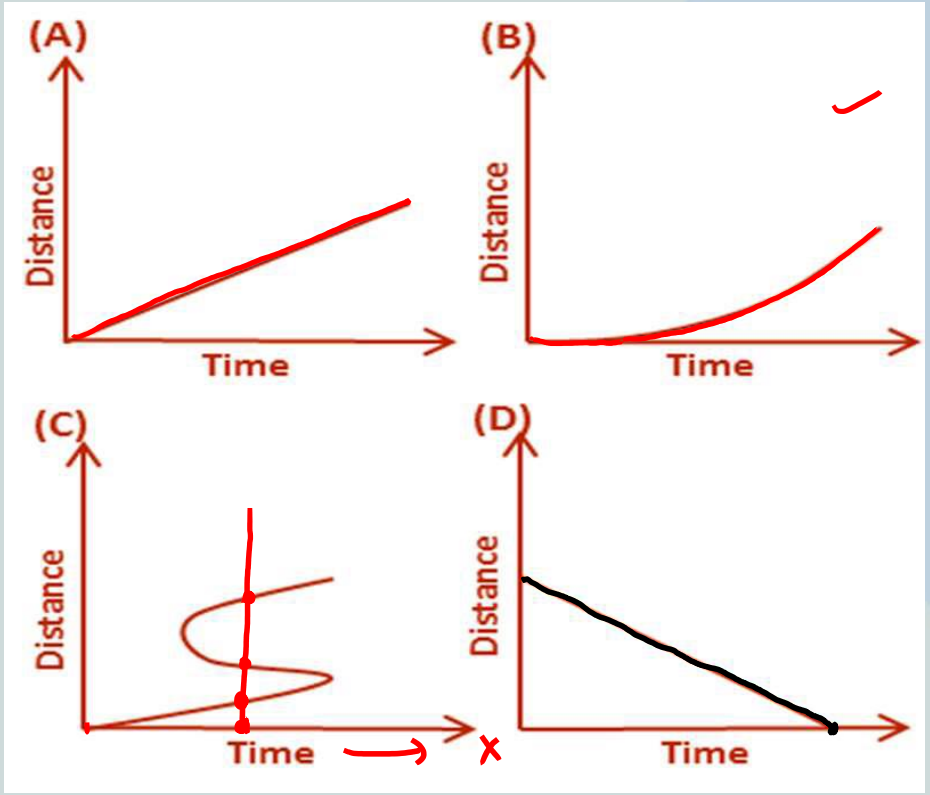
10500

Ans

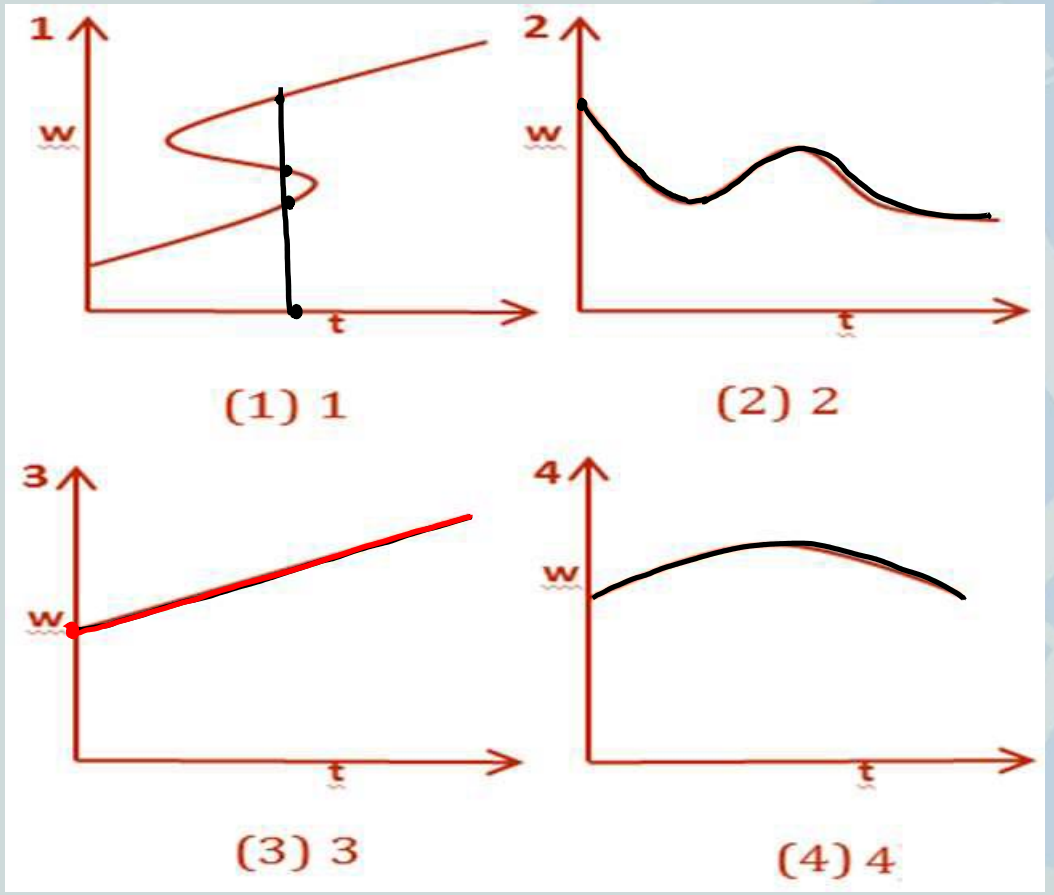
$$\% = \frac{9000}{10500} \times 100 = \frac{600}{7} = 85.7 \approx 86\%$$

A student observes the movement of four snails and plots the graphs of distance moved as a function of time as given in figures (A), (B), (C) and (D).
Which one of the following is not correct?

(1) Graph (A) (2) Graph (B) (3) Graph (C) (4) Graph (D)



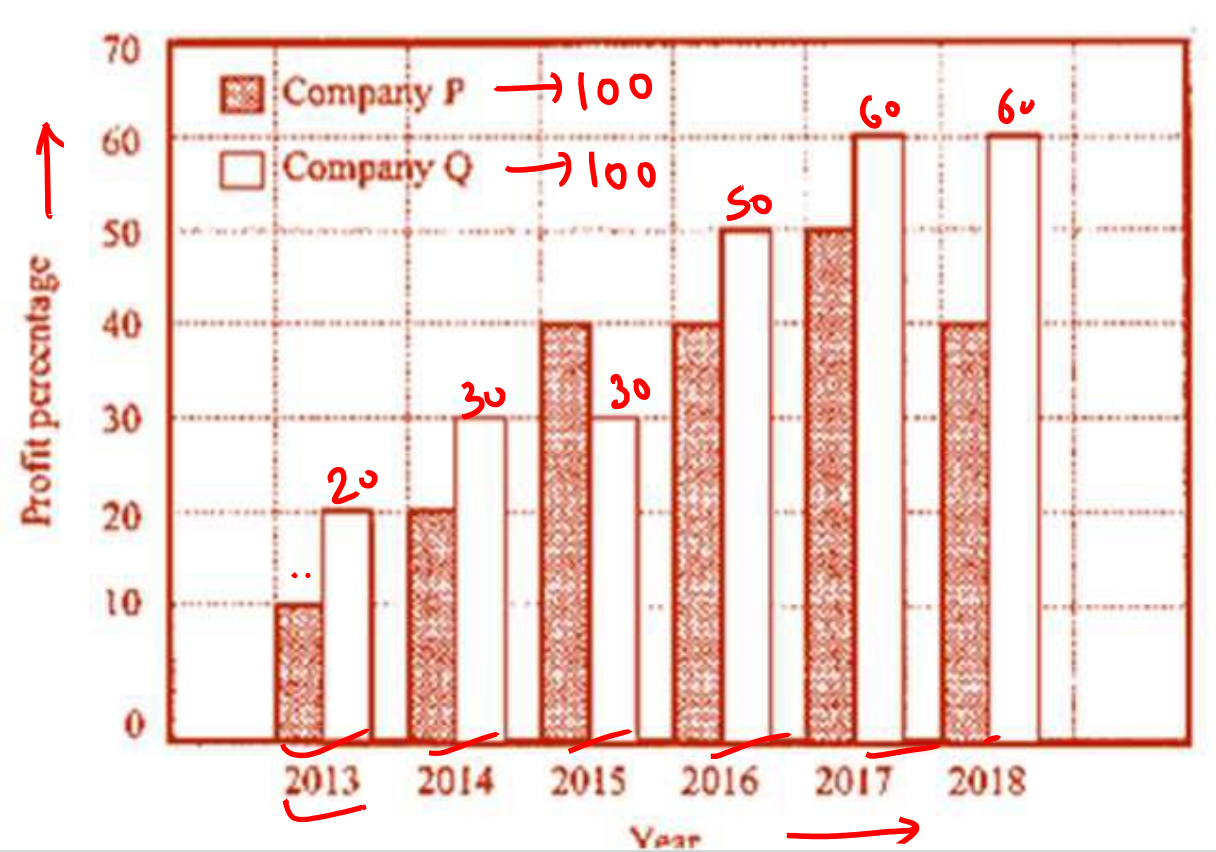
If we plot the weight (w) versus age (t) of a child in a graph, the one that will never be obtained from amongst the four graphs given below is:



(1) 1 (2) 2 (3) 3 (4) 4

The profit shares of two companies P and Q are shown in the figure. If the two companies have invested a fixed and equal amount every year, then the ratio of the total revenue of company P to the total revenue of company Q, during 2013 - 2018 is_____.

(A) 15:17 (B) 16:17 (C) 17:15 (D) 17:16



Revenue = Investment + Profit

$$\frac{P}{Q} = \frac{100 + 200}{100 + 250} = \frac{300}{350} = \frac{6}{7}$$

The graph depicts the petrol prices (in Rs. Per litre) for the months April, May and June. Pick the INCORRECT statement.

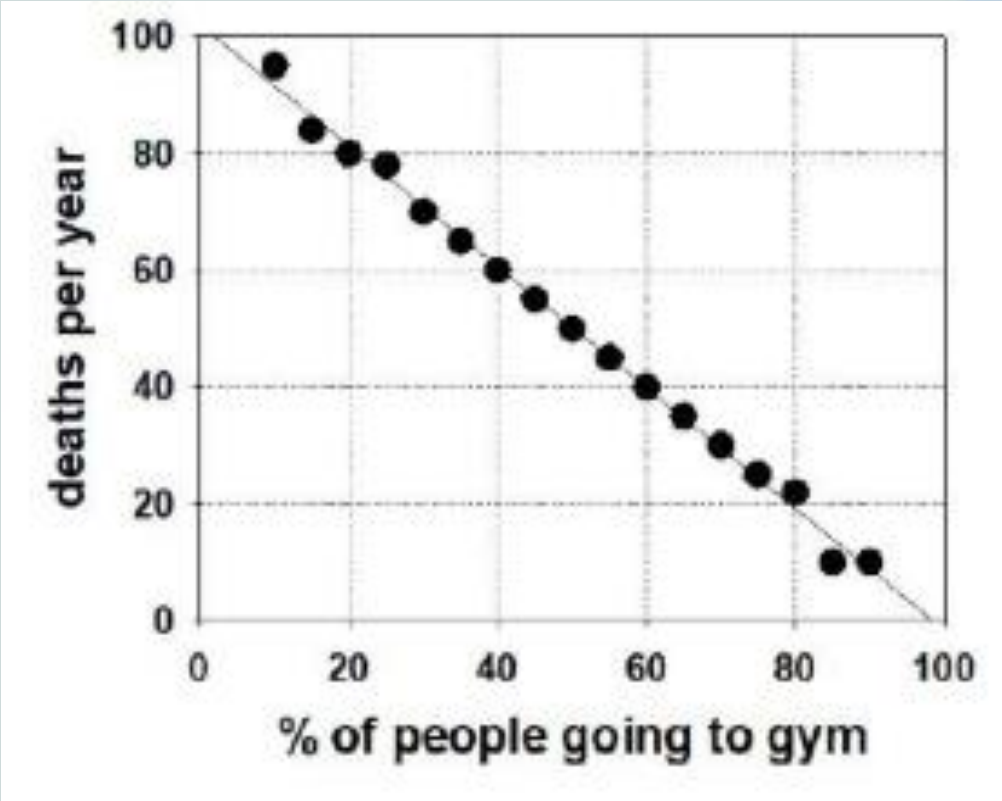
(1) The highest price never crossed 75.

(2) The largest difference between the highest and lowest price was for the month of june.

(3) Month of june showed the largest decrease of price between the opening date and closing date price.

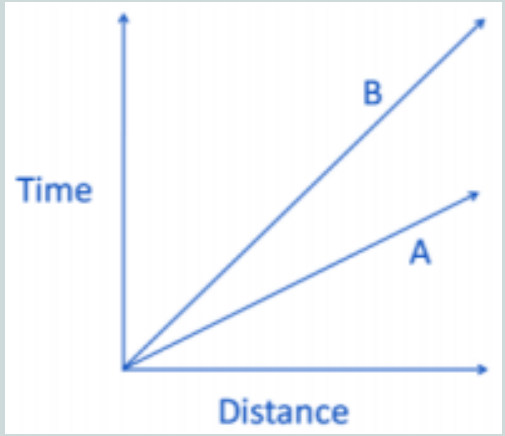
(4) All depicted prices lie between 70 and 80.

Given graph depicts the data of people going to gym and deaths per year in different cities. Which of the following can be definitely concluded from the graph?

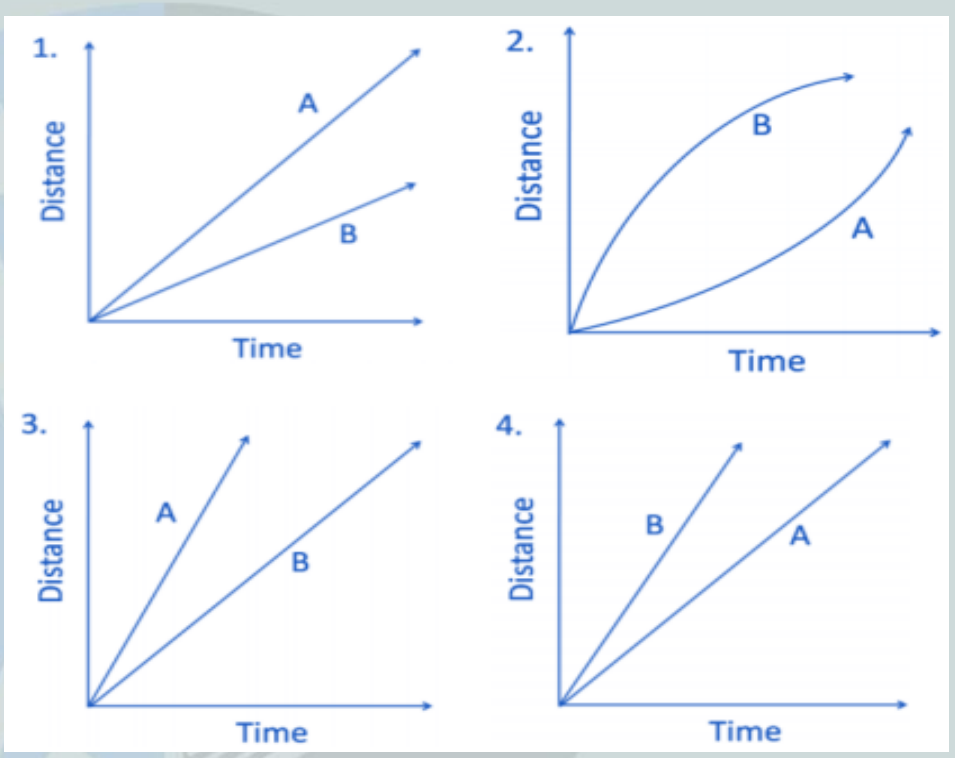


1. Gym makes people fit and improves their health.
2. None will die if all go to gym.
3. Gym helps people to save their lives in cities.
4. In the city where on the average 50% people go to gym, 50 people die per year.

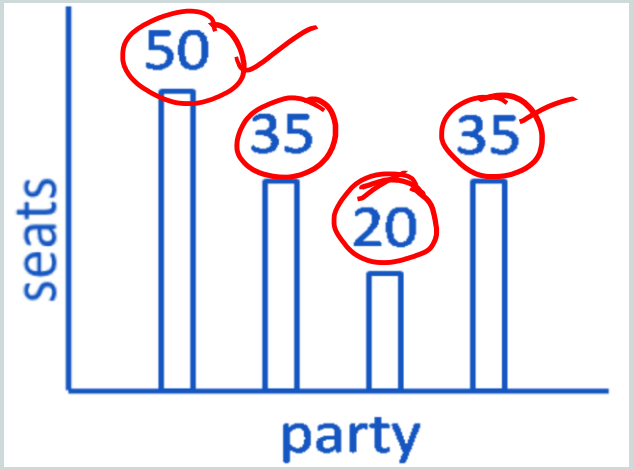
Time-distance graph of two objects A and B are shown



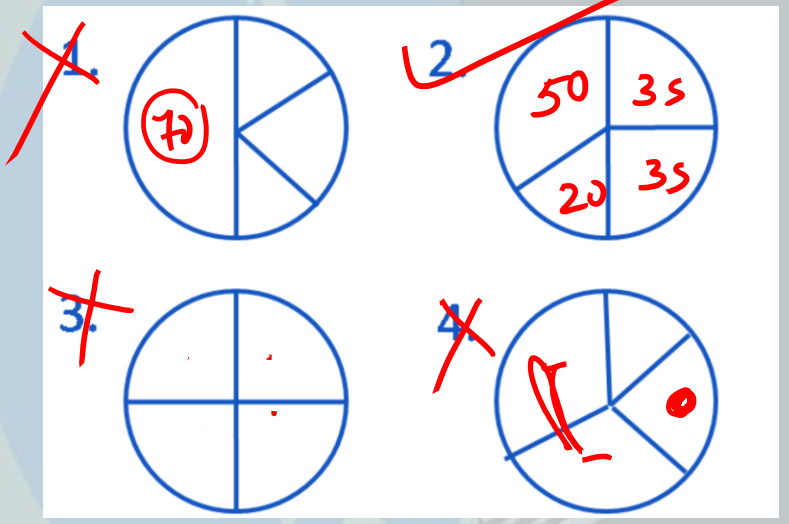
If the axes are interchanged, then the same information is shown by:



The bar chart shows number of seats won by four political parties in a state legislative assembly. :



Which of the following pie-charts correctly depicts this information?



$\frac{140}{2} = 70$

In a survey, 300 respondents were asked whether they own a vehicle or not. If yes, they were further asked to mention whether they own a car or scooter or both. Their responses are tabulated below. What percent of respondents do not own a scooter?

Rejom

		Men	Women
Own Vehicle	Car	40	34
	Scooter	30	20
	Both	60	46
Do not own vehicle		20	50

40 + 34 = 74

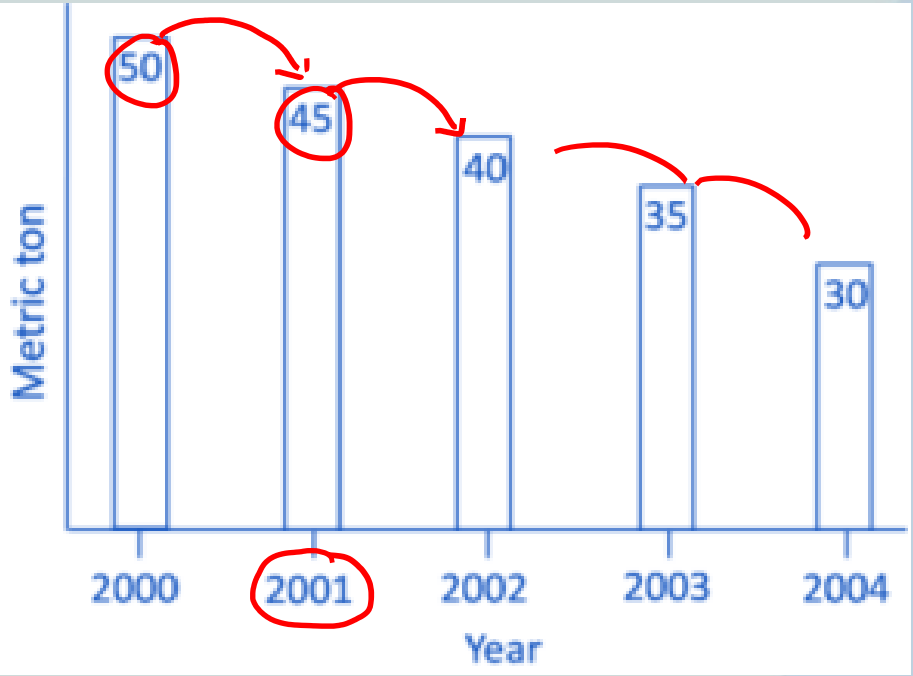
70

144

$\therefore$ = $\frac{144}{300} \times 100 = 48\%$

(1) 42% (2) 48% (3) 52% (4) 56%

Wheat production of a country over a number of years is shown. Which year recorded highest percent reduction in production over the previous year?



2001 $\frac{5}{50} \times 100$

2002 $\frac{5}{45} \times 100$

2003 $\frac{5}{40} \times 100$

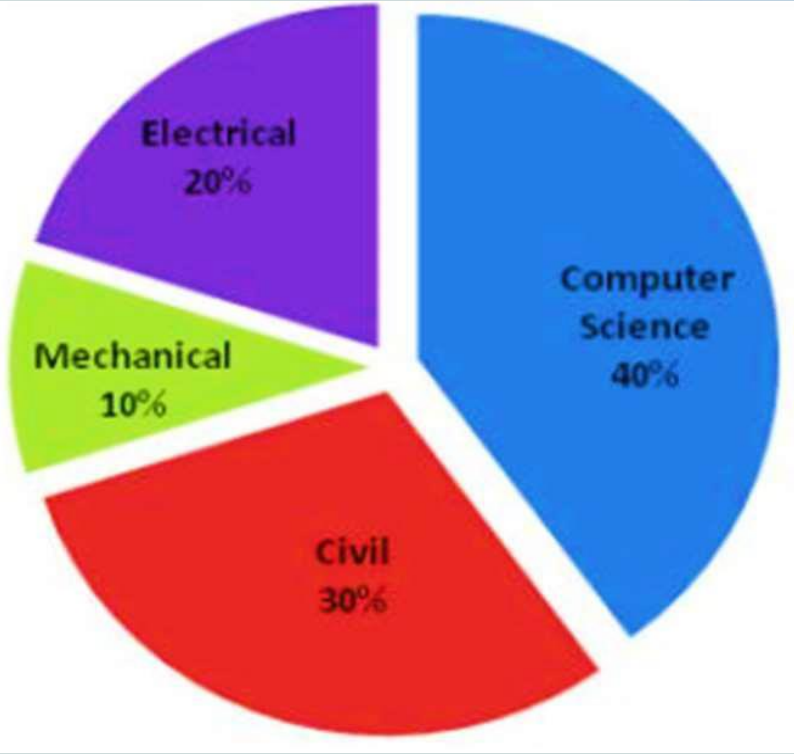
2004 $= \frac{5}{35} \times 100$

(1) 2001
(2) 2002
(3) 2003
(4) 2004 Ans

The pie chart below has the breakup of the number of students from different departments in an engineering college for the year 2012. The proportion of male to female students in each department is 5:4. There are 40 males in Electrical Engineering. What is the difference between the numbers of female students in the civil department and the female students in the Mechanical department?

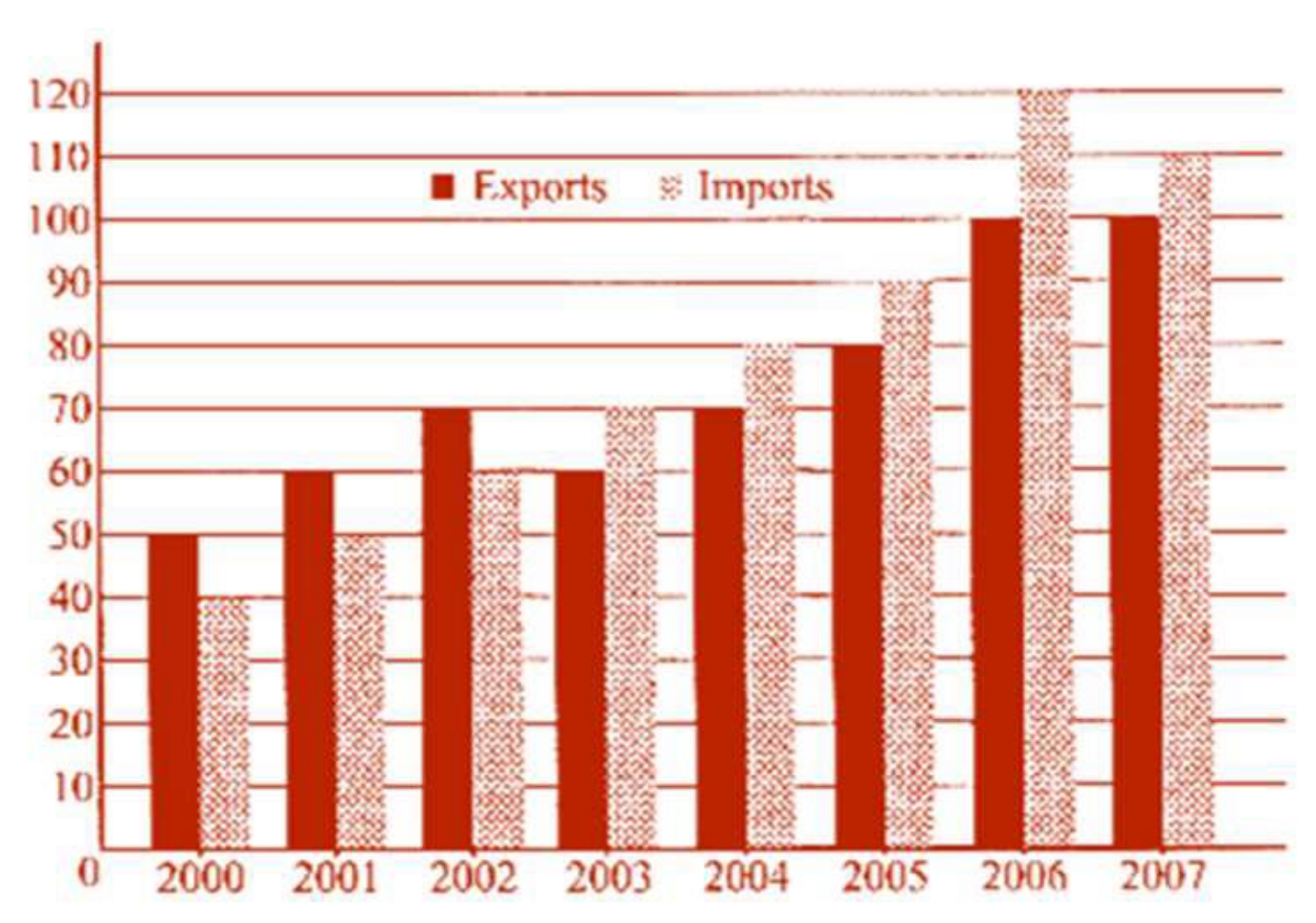
(1) 30 (2) 32 (3) 34 (4) 36

HW



The exports and imports (in crores of Rs.) of a country from 2000 to 2007 are given in the following bar chart. If the trade deficit is defined as excess of imports over exports, in which ear is the trade deficit 1/5th of the exports?
(A) 2005 (B) 2004 (C) 2007 (D) 2006

HW

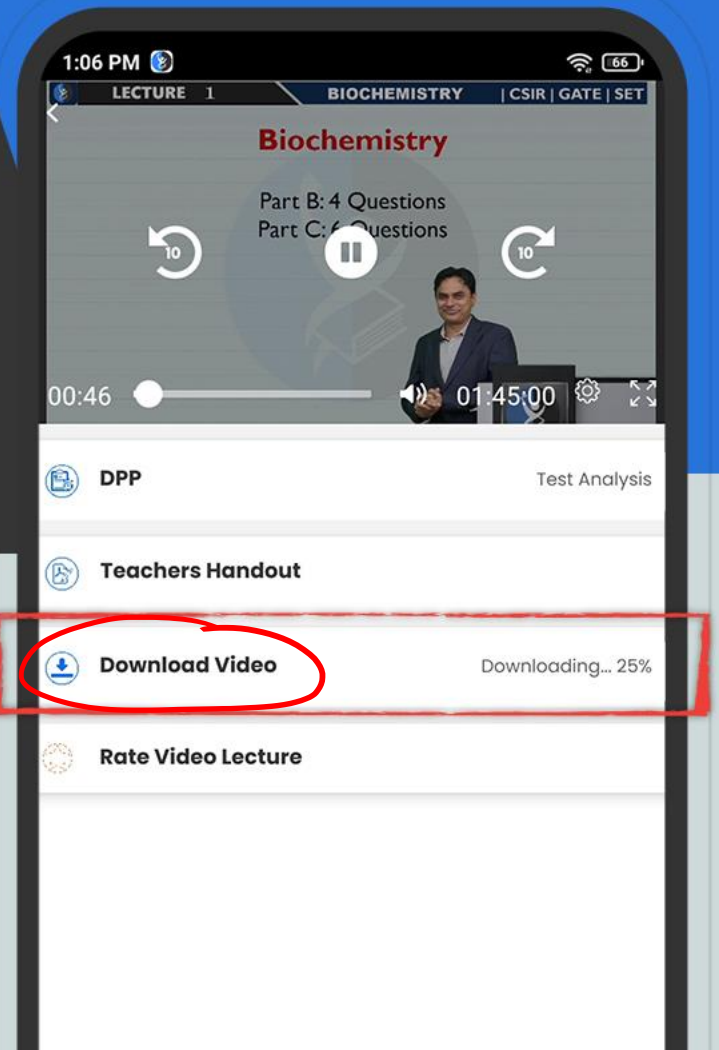


IfAS

UGC NET | SET | PSC

SAVE YOUR INTERNET DATA USAGE!

Minimize Internet Usage by Downloading Lectures from the IFAS App & Access them Offline



IfAS

Harshada Sharma

Earned: ₹25,500

"As is widely recognized, IFAS stands as India's leading institute for IIT JAM examination preparation. My Personal philosophy has always revolved around helping others and I've had the pleasure of introducing the IFAS Online Course to 12 of my classmates and juniors, which in turn allowed me to earn 25,500 rupees. You too can join in and refer your friends, allowing you to earn a 5% rewards based on the fees each of your referred friends Pay"

REFER & EARN

Step – 01 Invite Friends

Share your referral code or Link with your friends.

Step – 02 Earn Cashback

On Every Purchase made using your referral code, you earn 5% instant cashback in your bank account.

Step – 03 Refer More, Earn More

Keep referring as many friends as you can and keep Earning cash as much as you can

Friendship is Sharing, Caring, Giving & Helping Each Other...!